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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/884,406	06/19/2001	Benjamin Lee Hertzler	06074 USA	2276

23543 7590 11/03/2004

AIR PRODUCTS AND CHEMICALS, INC.  
PATENT DEPARTMENT  
7201 HAMILTON BOULEVARD  
ALLENTOWN, PA 181951501

EXAMINER

JOHNSON, JONATHAN J

ART UNIT	PAPER NUMBER
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1725

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/884,406	HERTZLER, BENJAMIN LEE	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jonathan Johnson	1725	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 7-22-04.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 2-4,6,8-10,14-16,18 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5,7,11-13,17 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-20 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

<sup>5</sup>  
Claim ~~1~~ 1, 5, 7, 11-13, 17, and 19 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 7-22-04. Applicant argues that all four species can be examined without burden to the Patent Office. For example, Species II - IV require a search in class 206/0.7, which is not required in Species I.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Art Unit: 1725

Claims 1, 5, 7, 11-13, 17, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,125,131 (Brandes et al.). With respect to Claim 1, Brandes et al. teach a storage and dispensing vessel having a gas outlet conduit and an interior section containing a solid-phase physical sorbent medium having physically sorptive affinity for a gas, said sorbent medium having said gas physically sorptively loaded on said sorbent medium (Figure 1, item 16); and a purifier comprising at least one layer of purification media located in the interior section of said storage and dispensing vessel wherein said purification media is located adjacent to said gas outlet conduit of said vessel and is adapted to provide that any gas desorbed from said sorbent medium must pass through and contact said purification media prior to exiting said vessel through said outlet conduit (Figure 1, items 19 and 32).

With respect to Claim 5, the teachings of Brandes et al. are the same as relied upon in the rejection of Claim 1. Brandes et al. teach said purifier includes a purifier conduit, one end of said purifier conduit being sealingly attached to said gas outlet conduit of said vessel, and a second end of said purifier conduit open to said interior section of said vessel containing said solid-phase physical sorbent medium, said purifier conduit including said at least one layer of purification media disposed in said purifier conduit, whereby any desorbed gas withdrawn from said vessel must pass through said purifier conduit from said end of said purifier conduit open to said interior section containing said solid-phase physical sorbent medium through to said end of said purifier conduit sealingly attached to said gas outlet conduit (Figure 1, items 19 and 32).

With respect to Claim 7, the teachings of Brandes et al. are the same as relied upon in the rejection of Claim 1. Brandes et al. teach one end of said purifier conduit being sealingly attached to said gas outlet conduit of said vessel, and a second end of said purifier conduit open to said interior section of said vessel containing said solid-phase physical sorbent medium, said purifier conduit including said at least one layer of purification media disposed in said purifier conduit, and wherein said purifier further includes at least one layer of purification media adjacent to and covering said second end of said purifier conduit, whereby any desorbed gas withdrawn from said vessel must first pass through and contact said at least one layer of purification media adjacent to said second end of said purifier conduit and then through said purifier conduit to reach said outlet conduit of said vessel (Figure 1, items 19 and 32).

With respect to Claim 12, Brandes et al. teach a storage and dispensing vessel having a gas outlet conduit and an interior section containing a solid-phase physical sorbent medium having physically sorptive affinity for a gas, said sorbent medium having said gas physically sorptively loaded on said sorbent medium (Figure 1, item 16); (b) a purifier comprising at least one layer of purification media located in the interior section of said storage and dispensing vessel wherein said purification media is located adjacent to said gas outlet conduit of said vessel and is adapted to provide that any gas desorbed from said sorbent medium must pass through said purification media prior to exiting said vessel through said outlet conduit (col. 5, ll. 15-25); and (c) said storage and dispensing vessel having a gas inlet conduit for supplying said gas from an external source into said vessel, said gas inlet conduit separate from said gas outlet conduit (Figure 1, items 32 and 19).

With respect to Claim 13, the teachings of Brandes et al. are the same as relied upon in the rejection of Claim 12. Brandes et al. teach wherein said gas inlet conduit is adapted to provide that said inlet gas does not pass through said purifier (Figure 1, items 32 and 19).

With respect to Claim 17, the teachings of Brandes et al. are the same as relied upon in the rejection of Claim 12. Brandes et al. teach said purifier includes a purifier conduit, one end of said purifier conduit being sealingly attached to said gas outlet conduit of said vessel, and a second end of said purifier conduit open to said interior section of said vessel containing said solid-phase physical sorbent medium, said purifier conduit including said at least one layer of purification media disposed in said purifier conduit, whereby any desorbed gas withdrawn from said vessel must pass through said purifier conduit from said end of said purifier conduit open to said interior section containing said solid-phase physical sorbent medium through to said end of said purifier conduit adjacent to said gas outlet conduit (Figure 1, item 19).

With respect to Claim 19, the teachings of Brandes et al. are the same as relied upon in the rejection of Claim 12. Brandes et al. teach said purifier includes a purifier conduit, one end of said purifier conduit being sealingly attached to said gas outlet conduit of said vessel, and a second end of said purifier conduit open to said interior section of said vessel containing said solid-phase physical sorbent medium (Figure 1, item 19), said purifier conduit including said at least one layer of purification media disposed in said purifier conduit, and wherein said purifier further includes at least one layer of purification media adjacent to and covering said second end

Art Unit: 1725

of said purifier conduit, whereby any desorbed gas withdrawn from said vessel must first pass through and contact said at least one layer of purification media adjacent to said second end of said purifier conduit and then through said purifier conduit to reach said outlet conduit of said vessel (Figure 1, item 11).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 11 is rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,125,131 (Brandes et al.). Brandes et al. teach an adsorbent based gas delivery system comprising: (a) a storage and dispensing vessel having a gas outlet conduit and an interior section containing a solid-phase physical sorbent medium having physically sorptive affinity for a gas, said sorbent medium having said gas physically sorptively loaded on said sorbent medium (Col. 5, ll. 55-65); and (b) a purifier comprising a purification media generally homogeneously mixed with said sorbent medium in the interior section of said storage and dispensing vessel such that substantially any gas desorbed from said sorbent medium must pass through and contact said purification media prior to exiting said vessel through said outlet conduit (col. 6, ll. 29-34). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the sorbent and chemisorbent material to be homogenous in order to ensure the fluid components are sorptively retained (col. 1, ll. 20-35). That is, it would have been obvious

Art Unit: 1725

to one of ordinary skill in the art at the time of the invention to choose the instantly claimed arrangement through process optimization, since it has been held that there the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable arrangement involves only routine skill in the art. See In re Boesch, 205 USPQ 215 (CCPA 1980).

### ***Response to Arguments***

Applicant argues that Brandes et al. does not teach the purification media is located adjacent to the gas outlet conduit. The examiner disagrees. During patent examination, the pending claims must be “given the broadest reasonable interpretation.” Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969). In the instant case, DICTIONARY.COM defines adjacent as “close to.” In applying the test of Prater, it is the examiner’s position that Brandes et al. teach a purification media (Figure 1, item 14) that is located close to the outlet conduit (Figure 1, item 19).

Applicant argues that Brandes et al. does not teach the claim 5 limitation of a “purifier conduit.” The examiner disagrees. As stated in the previous office action, the examiner relies on Figure 1, item 19 to teach this limitation, which is the “frit or other filter means” attached to the port (col. 5, ll. 15-26).

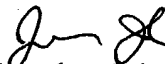


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Johnson whose telephone number is 571-272-1177. The examiner can normally be reached on M-Th 7AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on 571-272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jonathan Johnson  
Examiner  
Art Unit 1725